What is claimed is:

1. A method of identifying a close-by node in a region of an overlay network, wherein the overlay network is a logical representation of a physical network, the method comprising:

determining first proximity information associated with a location of a first node in the physical network;

searching through a map associated with a region of the overlay network using the first proximity information, wherein the map includes proximity information associated with locations of nodes physically close in the physical network;

identifying a routing node in the region of the overlay network based on the searching through the map, wherein the routing node is a node in the region physically closest to the first node in the physical network relative to other nodes in the region.

2. The method of claim 1, wherein searching through a map associated with a region of the overlay network using the first proximity information, further comprises:

comparing proximity information in the map associated with a plurality of nodes in the overlay network to the first proximity information to identify the node in the region physically closest to the first node in the physical network.

3. The method of claim 1, further comprising:

storing routing information for the routing node in a routing table for the first node, such that messages transmitted to the region of the routing node are transmitted

to the routing node in the region from the first node wherein the first node is located in another region in the overlay network.

4. The method of claim 3, wherein the overlay network is an expressway, content-addressable, overlay network, and the first node and the routing node are expressway routing nodes in the overlay network.

5. The method of claim 1, further comprising storing the map in nodes logically close in the overlay network, such that the proximity information in the map for the nodes physically close in the physical network is stored in the nodes logically close in the overlay network.

6. The method of claim 1, further comprising generating the proximity information for the map by performing steps of:

selecting landmark nodes in the physical network;

determining distances to the landmark nodes for the nodes in the overlay network;

determining landmark vectors for the nodes in the overlay network based on the determined distances to the landmark nodes;

mapping the landmark vectors to points in the region in the overlay network; and

storing the landmark vectors at nodes associated with the points in the region as the proximity information for the map.

7. The method of claim 6, wherein selecting landmark nodes in the physical network comprises randomly selecting nodes in the physical network to be the landmark nodes.

8. The method of claim 6, wherein mapping the landmark vectors to points in the region in the overlay network further comprises:

assigning landmark numbers to grids in a landmark space;

identifying a grid of the grids where each landmark vector is located in the landmark space;

assigning one of the landmark numbers to each of the landmark vectors based on the grid where the a respective landmark vector is located; and

mapping the landmark numbers from the landmark space to the overlay network using a space filling curve, wherein the landmark space is an n-dimensional space and the overlay network is an m-dimensional space, and n>m.

9. A method of identifying a node in a region of an overlay network, wherein the overlay network is a logical representation of a physical network, the method comprising:

determining first proximity information associated with a location of a source node in the physical network;

searching through a map associated with a target region of the overlay network using the first proximity information, wherein the map includes proximity information associated with locations of nodes physically close in the physical network; and

identifying a subset of nodes in the target region closest to the first node in the physical network based on the searching through the map.

10. The method of claim 9, further comprising:

determining distances from the source node to the subset of nodes; and

selecting from the subset of nodes a node closest to the source node in the physical network based on the determined distances.

11. The method of claim 10, further comprising:

entering the selected closest node in a routing table for the source node, wherein the selected closest node is used by the source node to route messages to the target region.

12. The method of claim 9, further comprising generating proximity information for nodes in the overlay network, the generated proximity information including the first proximity information and the proximity information for the map, wherein generating the proximity information comprises:

selecting landmark nodes in the physical network;

determining distances from a substantial number of nodes in the overlay network to the landmark nodes;

determining locations in the physical network for the substantial number of nodes based on the determined distances to the landmark nodes.

13. The method of claim 12, wherein the locations comprise landmark vectors for the substantial number of nodes, wherein the landmark vectors include components representing distances from each of the substantial number of nodes to each of the landmark nodes.

14. The method of claim 9, further comprising:

identifying a location of a node in the target region in the overlay network storing the map; and

transmitting a map lookup request to the node in the target region.

15. The method of claim 14, wherein identifying a location of a node in the target region storing the map further comprises hashing a landmark number associated with the target region using a hash function.

16. The method of claim 15, wherein the hash function comprises a space filling curve.

17. A system comprises nodes connected via at least one network, wherein proximity information associated with physical locations of the nodes physically close in the system is stored at a group of the nodes logically close in an overlay network for the system.

18. The system of claim 17, wherein the proximity information associated with the physical locations of the nodes is determined by measuring the distances from the nodes to landmark nodes in the system.

19. The system of claim 18, wherein the distances are measured based on a network metric including one of round-trip-time and network hops.

20. The system of claim 17, wherein the overlay network comprises a distributed hash table overlay network.

21. The system of claim 20, wherein the overlay network comprises an expressway routing overlay network including expressway routing nodes of the nodes in the system.

22. The system of claim 17, wherein the proximity information comprises proximity information stored in a region in the overlay network, and a first node of the nodes in the system routing a message to the region uses the proximity information stored in the region to select a node in the region to receive the message, wherein the selected node in the region is physically closest to the first node among other nodes in the region.

23. A node in an overlay network, wherein the overlay network is a logical representation of a physical network, the node comprising:

means for determining first proximity information associated with a location of the node in the network;

means for searching through a map associated with a region of the overlay network using the first proximity information, wherein the map includes proximity information associated with locations of other nodes physically close in the physical network; and

means for identifying a routing node in the region of the overlay network based on the searching through the map, wherein the routing node is a node in the region physically closest to the node relative to other nodes in the region.

24. The node of claim 23, wherein the node comprises means for storing routing information for the routing node in a routing table, such that messages transmitted to the region of the routing node are transmitted to the routing node.

25. The node of claim 23, further comprising:

means for storing the map for the region; and

means for updating the stored map in response to detecting predetermined changes to the network.